

WEST**End of Result Set**

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L1: Entry 2 of 2

File: DWPI

Sep 13, 1996

DERWENT-ACC-NO: 1996-469752

DERWENT-WEEK: 199647

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TITLE: Parallel electrode type spark plug mfg method for engine - involves forming spark gap between ground electrode and shaft of subject fitting

PATENT-ASSIGNEE:

ASSIGNEE

CODE

NGK SPARK PLUG CO LTD

NITS

PRIORITY-DATA: 1995JP-0061706 (February 24, 1995)

PATENT-FAMILY:

PUB-NO

PUB-DATE

LANGUAGE

PAGES

MAIN-IPC

JP 08236263 A

September 13, 1996

010

H01T021/02

APPLICATION-DATA:

PUB-NO

APPL-DATE

APPL-NO

DESCRIPTOR

JP 08236263A

February 24, 1995

1995JP-0061706

INT-CL (IPC): H01 T 13/20; H01 T 21/02

ABSTRACTED-PUB-NO: JP 08236263A

BASIC-ABSTRACT:

The method involves cooling of a hot metal material that is to be shaped. An angular part and a cylindrical part are formed in the periphery of metal material by cutting processing. A resistance welding of a ground electrode (11) is carried out to an end surface of cylindrical part. Then, the ground electrode is cut to a predetermined length.

After forming a screw part in periphery of a subject fitting (G), the ground electrode is bent to L-shape by a bending moulding machine. Then, a nickel plating is given to prevent plating crack. A spark gap (12) is formed between ground electrode and a shaft (2) of subject fitting.

ADVANTAGE - Prevents detachment from engine by rust. Prevents peeling off of nickel plating. Eliminates need of strong acid processing. Stabilizes performance of spark plug.

CHOSEN-DRAWING: Dwg.1/14

TITLE-TERMS: PARALLEL ELECTRODE TYPE SPARK PLUG MANUFACTURE METHOD ENGINE FORMING SPARK GAP GROUND ELECTRODE SHAFT SUBJECT FIT

DERWENT-CLASS: X22

EPI-CODES: X22-A01E1E;

SECONDARY-ACC-NO:

Non-CPI Secondary Accession Numbers: N1996-395982

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L1: Entry 1 of 2

File: JPAB

Sep 13, 1996

PUB-NO: JP408236263A

DOCUMENT-IDENTIFIER: JP 08236263 A

TITLE: MANUFACTURE OF SPARK PLUG

PUBN-DATE: September 13, 1996

INVENTOR-INFORMATION:

NAME

COUNTRY

KAGAWA, JUNICHI

YAMAGUCHI, MAKOTO

ASSIGNEE-INFORMATION:

NAME

COUNTRY

NGK SPARK PLUG CO LTD

APPL-NO: JP07061706

APPL-DATE: February 24, 1995

INT-CL (IPC): H01 T 21/02; H01 T 13/20

ABSTRACT:

PURPOSE: To provide a spark plug with improved heat resistance by carrying out plating after an earthing electrode welded to main metal fittings is temporarily curved into almost the same shape as the final shape.

CONSTITUTION: An earthing electrode 11 is joined to a tip end face of a cylindrical part of main metal fittings 4 by resistance welding. The earthing electrode 11 is bent into an L-shape which is almost the same shape as that in the final state to be assembled. Then, after the metal fittings 4 are pickled to remove oxides and powders due to cutting, corrosion resistant at high temperature and hardly processible surface treatment is carried out for the inner circumference and the outer circumference of the metal fittings 4 and the earthing electrode 11 by plating. Next, an insulator built in a middle axis 2 is assembled with the metal fittings 4 and a spark gap 12 is formed between the earthing electrode 11 and the middle axis 2. After that, if necessary, a gap gauge 13 is inserted in the spark gap 12 and the spark gap 12 is finely adjusted by lightly hitting the earthing electrode 11 from the outside. Troubles such as cracking and peeling of the plating scarcely occur in the obtained spark plug 1.

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WEST Search History

DATE: Tuesday, March 11, 2003

Set Name **Query**
side by side

Hit Count **Set Name**
result set

DB=JPAB,EPAB,DWPI; PLUR=YES; OP=OR

L1 (spark adj (plug or plugs)).ti. and ((plate or plated or plating) with
zinc)

17 L1

END OF SEARCH HISTORY

WEST

Ref.



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L1: Entry 15 of 17

File: DWPI

Mar 16, 2001

DERWENT-ACC-NO: 2001-384455

DERWENT-WEEK: 200141

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TITLE: Spark plug manufacture for IC engines of motor vehicles involves removing formed zinc plated layer in leading end portion of ground electrode and welding refractory metal chip in exposed surface

PATENT-ASSIGNEE:

ASSIGNEE

NGK SPARK PLUG CO LTD

CODE

NITS

PRIORITY-DATA: 1999JP-0240206 (August 26, 1999)

PATENT-FAMILY:

PUB-NO

PUB-DATE

LANGUAGE

PAGES

MAIN-IPC

JP 2001068250 A

March 16, 2001

015

H01T013/20

APPLICATION-DATA:

PUB-NO

APPL-DATE

APPL-NO

DESCRIPTOR

JP2001068250A

August 26, 1999

1999JP-0240206

INT-CL (IPC): C23 F 1/00; C25 D 7/00; H01 T 13/20; H01 T 21/02

ABSTRACTED-PUB-NO: JP2001068250A

BASIC-ABSTRACT:

NOVELTY - Base end side of ground electrode (4) is attached to opening in cylindrical housing (1). Zn plated layer is formed on attachment section of ground electrode and housing. The plated layer in leading end portion of ground electrode is peeled and refractory metal chip is welded to exposed surface. Spark discharge gap is formed between ground electrode and central terminal electrode (3) covered by insulator (2) in contact with housing.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for spark plug.

USE - Manufacturing spark plugs used for internal combustion engines especially gasoline engine used in motor vehicles.

ADVANTAGE - Zinc plated layer is formed efficiently on ground electrode except in the ground electrode leading end.

DESCRIPTION OF DRAWING(S) - The figure shows the cross-section of spark plug.

Cylindrical housing 1

Insulator 2

Electrodes 3,4

CHOSEN-DRAWING: Dwg.1/9

TITLE-TERMS: SPARK PLUG MANUFACTURE IC ENGINE MOTOR VEHICLE REMOVE FORMING ZINC PLATE

LAYER LEADING END PORTION GROUND ELECTRODE WELD REFRACTORY METAL CHIP EXPOSE SURFACE

DERWENT-CLASS: L03 X22

CPI-CODES: L03-H05;

EPI-CODES: X22-A01E1; X22-A01E1E;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C2001-117711

Non-CPI Secondary Accession Numbers: N2001-282165

WEST

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L1: Entry 1 of 17

File: JPAB

Nov 16, 2001

PUB-NO: JP02001316846A

DOCUMENT-IDENTIFIER: JP 2001316846 A

TITLE: METALLIC MEMBER WITH CHROMATE FILM, SPARK PLUG AND METHOD FOR PRODUCTION THEREOF

PUBN-DATE: November 16, 2001 ✓

INVENTOR-INFORMATION:

NAME

COUNTRY

NASU, HIROTETSU

MATSUTANI, WATARU

ASSIGNEE-INFORMATION:

NAME

COUNTRY

NGK SPARK PLUG CO LTD

APPL-NO: JP2000330538

APPL-DATE: October 30, 2000

INT-CL (IPC): C23 C 22/53; C23 C 22/30; C23 C 22/77; C23 C 22/82; C23 C 28/00; H01 T 13/02; H01 T 21/02

ABSTRACT:

PROBLEM TO BE SOLVED: To provide a metallic member with a chromate film a little in hexavalent chromium content of the chromate film and also excellent in corrosion resistance and thermal resistance, a spark plug equipped with the above metallic member and a production method therefor.

SOLUTION: A metallic member 55 (wherein a zinc plating layer 56 is formed for corrosion prevention) is immersed in a chromate treating bath prepared by blending a trivalent chromium salt and a complexing agent for the trivalent chromium. A chromate film 57 with a film thickness of 0.2-0.5

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L1: Entry 3 of 17

File: JPAB

Mar 16, 2001

PUB-NO: JP02001068250A

DOCUMENT-IDENTIFIER: JP 2001068250 A

TITLE: MANUFACTURE OF SPARK PLUG, AND SPARK PLUG

PUBN-DATE: March 16, 2001

INVENTOR-INFORMATION:

NAME

COUNTRY

SAKURA, AKIO

ASSIGNEE-INFORMATION:

NAME

COUNTRY

NGK SPARK PLUG CO LTDAPPL-NO: JP11240206APPL-DATE: August 26, 1999INT-CL (IPC): H01 T 13/20; C23 F 1/00; C25 D 7/00; H01 T 21/02

ABSTRACT:

PROBLEM TO BE SOLVED: To effectively form a zinc-plated layer in a portion other than a tip part of a grounding electrode, in a form integrated with a main metal and the electrode.

SOLUTION: A zinc-based plating layer 141 is formed in a lump in an outer face of a metal assembly with a base end side of a grounding electrode 4 attached to a main metal fitting 1, then the plating layer formed in an electrode tip side is separation-removed, and a high melting point metal chip is welded on a substrate electrode material surface exposed by the separation to form a spark part. That is, since masking not to form the plating layer in the electrode 4 tip side is eliminated, a spark plug 100 of a type forming the spark part in the electrode 4 is manufactured highly efficiently. Since masking treatment is not interposed after the separation of the plating layer, fouling and deposition of oil and the like are hardly generated, and cleaning for a substrate electrode material surface layer part is enhanced by the separation. As a result thereof, welding strength for the high melting point metal chip is enhanced, and a trouble such as separation of the spark part is hardly generated.

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L1: Entry 14 of 17

File: DWPI

Apr 20, 2001

DERWENT-ACC-NO: 2001-371742

DERWENT-WEEK: 200139

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TITLE: Spark plug manufacturing method used for internal combustion engine of motor vehicles, involves welding refractory metal tip to exposed portion of ground electrode to form refractory metal ignition section

PATENT-ASSIGNEE:

ASSIGNEE

NGK SPARK PLUG CO LTD

CODE

NITS

PRIORITY-DATA: 1999JP-0282180 (October 1, 1999)

PATENT-FAMILY:

PUB-NO

PUB-DATE

LANGUAGE

PAGES

MAIN-IPC

JP 2001110545 A

April 20, 2001

015

H01T013/20

APPLICATION-DATA:

PUB-NO

APPL-DATE

APPL-NO

DESCRIPTOR

JP2001110545A

October 1, 1999

1999JP-0282180

INT-CL (IPC): H01 T 13/20; H01 T 13/39

ABSTRACTED-PUB-NO: JP2001110545A

BASIC-ABSTRACT:

NOVELTY - A ground electrode (4) is attached to base end of main fitting structure (1). Zinc group plated layers are formed on leading end portion of electrode and outer surface of main fitting structure. Plated layer formed on electrode end side is peeled by electrolysis. A refractory tip is welded to portion of electrode which is exposed by peeling zinc group plated layer to form refractory metal ignition section.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for spark plug.

USE - For manufacturing spark plugs used for ignition of gasoline engine, internal combustion engine of motor vehicles, etc.

ADVANTAGE - Spark plug is manufactured efficiently. Adhesion of stain, oil on ground electrode after peeling the zinc group plated layer is prevented. Hence welding strength of refractory metal tip is enhanced.

DESCRIPTION OF DRAWING(S) - The figure shows the longitudinal cross section of spark plug.

Main fitting structure 1

Ground electrode 4

CHOSEN-DRAWING: Dwg.1/10

TITLE-TERMS: SPARK PLUG MANUFACTURE METHOD INTERNAL COMBUST ENGINE MOTOR VEHICLE WELD REFRACTORY METAL TIP EXPOSE PORTION GROUND ELECTRODE FORM REFRACTORY METAL IGNITION

SECTION

DERWENT-CLASS: X22

EPI-CODES: X22-A01E1A;

SECONDARY-ACC-NO:

Non-CPI Secondary Accession Numbers: N2001-271823